UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

EX PARTE GREGORY M. GLENN

U.S. PATENT APPLICATION NUMBER 10/684,583

FILING DATE: OCTOBER 14, 2003

REPLY TO EXAMINER'S ANSWER

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ARGUMENT

Independent claim 1 recites the following:

i) 'a memory device configured to store calibration information,'

ii) a control board configured to 'process the raw data based on at least the calibration information stored in the memory device,' and

iii) a control board configured to 'wirelessly download updates to the stored calibration information.'

The Examiner contends Wilson teaches calibration of remotely controlled and customizable sensors. *Examiner's Answer*, 11. The Appellants disagree, since none of the three quoted sections of Wilson mention anything regarding calibration. The cited sections of Wilson are included below in their entirety:

> The software program for the PC provides for the sensing, monitoring, and controlling of numerous types of electric devices in a wide variety of applications, The program, named "MASTER CONTROL" (trademark of Ansan Industries, Ltd.), allows the average user to build complex adaptive control system configurations using the I/O Bridge devices which connect to the PC via the keyboard port. The MASTER CONTROL program uses a point-and-click environment to allow the user to readily customize the system, thus allowing both the hardware and the software to perform unlimited applications. For example, a user can utilize the MASTER CONTROL program to create a security monitoring system, an irrigation control system, and a temperature monitoring and control system for the home. All three of these systems can be monitored and controlled from a single computer using a single I/O Bridge device.

Wilson, 5: 42-59.

> The preferred embodiment utilizes a MACINTOSH brand computer, available from Apple Computer, Inc. The use of the MACINTOSH computer as the CPU for the control system has numerous advantages over traditional monitoring and control system processors by providing the user with graphic "soft control panels", i.e. computer-simulated monitor and control screens using representative graphical symbols or "icons" to monitor and control a wide variety of systems. The primary

> advantage of using soft control panels is the ability to readily customize the control system for a particular application, e.g., from a security system to a production monitor, or to change the system configuration "on the fly", e.g., to accommodate a faulty sensor Since the computer has a built-in timekeeping capability, the user can easily instruct the system to turn on or off certain devices at predetermined times only on particular days. Furthermore, the PC can be used to make decisions based on several conditions such that the user can specify complex requirements for each application. The program will also log all the events which have occurred. As an example of the system's flexibility, the user could readily construct a security system which would automatically turn itself on after 10:30 p.m. and turn off after 7:00 a.m. The system would incorporate all of the typical convenience features, such as exit delays (to allow time to get out of the house before the alarm system activates) and entrance delays (to allow time to enter the house to disarm the security system). The system would further allow the user to set up specific conditions for an alarm, e.g., if a window sensor is activated (i.e. the window is opened or broken), the system would wait until another sensor is activated (such as an inside motion sensor) before the alarm is triggered. This will avoid a potential false alarm which would occur, for instance, when a bird hits the window, or when thunder shakes the window. Thus, logic conditionals allow the system to require the activation of any number of sensors in any desired sequence in order to ring the alarm.

Wilson, 6: 3-43.

> Digital inputs, located in display box 81, are used in applications where an electronic device digital sensor produces a monitoring signal which is either on or off, true or false, open or closed, etc. Analog inputs, located in display box 82, are used in applications where the analog sensors provide inputs having a specific reading within a range of values, typically measured in millivolts. Digital outputs, located in display box 83, are used to turn on or off any electrically-operated device.

Wilson, 10:22-30.

The Examiner argues that "[c]alibration **would have been** one of the included functions of the sensors of Wilson. Therefore, this calibration function would have been inherently incorporated into Kail, upon incorporating the sensors of Wilson, themselves into Kail." *Examiner's Answer*, 11. The Appellants disagree that the Examiner can find a calibration function in functions that **do not concern calibration**. In addition to the lack of

calibration, the combined references also fail to teach all the claimed elements pertaining to such calibration.

To 'calibrate' means "to standardize by determining a deviation from a standard so as to ascertain the proper correction factors." E.g., *Merriam-Webster Online Dictionary*: http://www.merriam-webster.com/dictionary/calibrate. To disclose the claimed calibration, the Examiner asserts that Kail teaches sensor activation. *Examiner's Answer*, 11. The relevant section of Kail is provided below in its entirety:

> In operation, the microprocessor is programmed with a set of activating parameters for the activation conditions and thereafter enters the inactive state. The microprocessor is activated responsive to the occurrence of the activating parameters of any of the activation conditions. The microprocessor obtains a status of the subject from the automatic sensor and the location of the portable unit from the location-determining device, and sends a status message, through the communications device, to the central monitoring device.

Kail, 2: 49-58. Kail's "activation" actually refers to switching a sensor on (active) and off (inactive), which is not the same as sensor calibration.

The Examiner then asserts that Kail teaches sensor initialization. *Examiner's Answer*, 11. The Appellants provide the section cited by the Examiner in context below:

> The microprocessor of the sensor interface unit is configured with a unique unit identifier, central monitoring device addressing data, and the initialization data and rules to be employed with each sensor embedded in or interfaced to the unit. The sensor interface unit may be configured on a sensor-by-sensor basis to transmit all sensor data received once activated, or all data meeting certain predefined criteria such as a time window, decibel level, or signal threshold. Data transmission from the sensor interface unit may be initiated manually, activated via a control signal from the central monitoring device, or automatically initiated in response to receipt of specified inputs from one or more of the interfaced sensors. In one embodiment, the sensor interface unit includes an audible tone or visible light generator feature that is activated by a call from the central monitoring device, and a means to activate/deactivate the feature.

Kail, 2:59 – 3:7. Kail's "initialization" actually refers to a "response to receipt of specified inputs," and not calibration, as claimed.

The Examiner then contends "that, upon incorporation of the sensors of Wilson into Kail, the microprocessor (22) of Kail, this would have provided the claimed memory device (44) to store calibration information." *Examiner's Answer*, 11. While any memory device can store a variety of information, neither Kail nor Wilson (nor any other cited reference, alone or in any combination) specifically teaches storage of calibration information, or any of the other claimed elements related to calibration.

A similar argument applies to the claimed wireless download of updates to the stored calibration information. Contrary to the Examiner's assertion, the Examiner has **not** provided "evidence that the storage and downloading of **calibrated** information is taught." *Examiner's Answer*, 12. While the claimed elements actually recite 'calibration' information, not "calibrated information," neither calibrated nor calibration information is taught by any combination of the cited references. Further, the September 19, 2008 office action referenced by the Examiner provides no additional support for the Examiner's argument.

The Examiner disputes the Appellants' argument that the Examiner did not address all claim elements. *Examiner's Answer*, 12. The Appellants, however, maintain their contention that certain claim elements are not addressed in any office action in such a manner as to be considered disclosed by a reference or combination of references. For reference, the Examiner argues as follows with respect to Kail:

> "However, Kail teaches that data from sensors would have been processed by the microprocessor (22) and as well at the remote central monitoring (14). Therefore, raw data from the sensors would have been processed in the system."

March 4, 2009 *Final Office Action*, 3.

Since Kail only teaches general processing of raw data and Wilson actually only teaches converting analog data, the Examiner seems to be arguing that references that teach processing raw data and converting analog data must also therefore teach the processing of raw data **based on calibration information**. Such a conclusion requires reliance on the following two (incorrect) premises:

> 1) raw data is the **same** as analog data, or all raw data is analog,
> 2) analog to digital conversion is the **same** as, or requires, calibration; calibration does not operate on digital information.

The Appellants disagree with the Examiner's line of reasoning and dispute the correctness of his premises and conclusion. Premise 1 is wrong, at least because digital sensor data can also be raw. 'Raw' simply means "as measured by the sensor, without performing any processing on it." Processing raw data is therefore **not the same** as calibration, and processing raw data does not imply or require calibration.

Premise 2 is also incorrect. As discussed above, to 'calibrate' means "to standardize by determining a deviation from a standard so as to ascertain the proper correction factors." E.g., *Merriam-Webster Online Dictionary*: http://www.merriam-webster.com/dictionary/calibrate. While calibration may be performed in conjunction with an analog to digital conversion, calibration is **not the same** and is **not required** for such conversion. To illustrate this point, the Examiner is invited to consider that digital sensors **can also use** calibration. The mere processing of "raw" or analog data does not teach (or imply or require) each and every claimed elements pertaining to calibration information. As such, a reference that merely teaches conversion of analog data does **not** teach the processing of raw data based on calibration information.

Based on at least the foregoing, the Appellants therefore submit that the Examiner fails to establish a prima facie case of obviousness.

CONCLUSION AND REQUESTED RELIEF

The Appellants evidenced the failure of the cited references to disclose at least the three claimed elements regarding calibration information:

i) 'a memory device configured to store calibration information,'

ii) a control board configured to 'process the raw data based on at least the calibration information stored in the memory device,' and

iii) a control board configured to 'wirelessly download updates to the stored calibration information.'

The Appellants maintain that the claims are patentable over the cited references and request all rejections be withdrawn. In light of the foregoing, the Applicants request the application be remanded with instructions to allow the same.

Respectfully submitted,
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November 5, 2009 **By:** /Tam Thanh Pham/

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